REMARKS

Reconsideration of the present application is respectfully requested. Claims 13 and 14 have been amended. No claims have been added or canceled. No new matter has been added.

Claims 13-16 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1 and 5 stand rejected under 35 U.S.C. § 102(b) based on U.S. Patent no. 5,975,738 of DeKoning et al. ("DeKoning"). Claims 2-4 and 6-13 stand rejected under 35 U.S.C. § 103(a) based on DeKoning in view of one or more other references, except for claims .

Applicants respectfully traverse the rejections. The amendments to the claims are made only to correct minor informalities. The amendments are *not* made in response to the rejections or to comply with any statutory requirement of patentability, since no such amendments are believed to be necessary.

Section112(2) Rejection

Claims 13-16 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite, due to the presence of the word "substantially" in those claims. While Applicants do not agree with the rejection or admit to its propriety, Applicants have nonetheless amended claims 13 and 14 to delete the word "substantially", in order to advance prosecution. Applicants believe that this amendment overcomes the rejection.

Prior art Rejections

Claim 1

Claim 1 stands rejected under 35 U.S.C. § 102(b) based on DeKoning. However, DeKoning does not teach or suggest reassigning ownership of at least one mass storage device, of a plurality of mass storage devices, to a second storage server head, *independently of a manner in which the second storage server head is connected to the plurality of mass storage devices*, as recited in claim 1.

DeKoning is directed to a technique for detecting a failure of a RAID controller in a storage subsystem. Although DeKoning does disclose that ownership of a disk can be reassigned to a different redundant disk array controller (RDAC) if the primary RDAC fails (a process called "takeover" in DeKoning), DeKoning is focused on how a failure is *detected*, *not* on how takeover is accomplished. As such, DeKoning does not disclose what kind of mechanism is used to reassign disk ownership. The section cited by the Examiner, col. 7, lines 23-31, merely states that takeover by one controller occurs if the other controller fails, but is completely silent regarding how disk ownership is reassigned during takeover. Neither is any disclosure or suggestion found anywhere else in DeKoning of reassigning disk ownership *independently* of a manner in which the RDAC is connected to the disks.

Furthermore, one cannot reasonably conclude that such functionality is inherent in the system of DeKoning, nor that such functionality would be obvious based on DeKoning. To the contrary, in the known prior art the usual way in which disk ownership was assigned was *dependent* on the *physical connections* between the server heads and the disks (see paragraph [0015] of Applicants' specification). If any assumption can be made about DeKoning, it is that the takeover process mentioned therein is *dependent* upon how the RDACs are connected to the disks. See, for

example, Figures 1 and 2 of DeKoning, both of which show (or at least clearly imply) that each RDAC is operatively coupled to each disk; there is no indication in DeKoning that takeover could be accomplished if that were not so.

Thus, DeKoning does not disclose all of the limitations of claim 1 and, as such, does not anticipate claim 1. Further, because DeKoning provides no suggestion or motivation to reassign disk ownership *independently of a manner in which the second storage server head is connected to the plurality of mass storage devices*, DeKoning does not render claim 1 obvious. Therefore, claim 1 and all claims which depend on it are patentable over the cited art.

Claim 7

Claim 7 recites:

> 7. A method of reconfiguring a storage system, the method comprising:
> operating an **integrated** storage system which includes **a plurality of mass storage devices installed in a chassis and a storage server head installed in the chassis** to access the mass storage devices in response to client requests, wherein the storage server head has ownership of the plurality of mass storage devices;
> disconnecting the storage server head from the mass storage devices;
> **removing the storage server head from the chassis**;
> connecting an **external** storage server head unit to the mass storage devices installed in the chassis; and
> using a command to reassign ownership of the plurality of mass storage devices from the storage server head to the **external** storage server head unit. (Emphasis added).

Claim 7 stands rejected under 35 U.S.C. § 103(a) based on DeKoning in view of U.S. Patent no. 5,193,050 of Dimmick et al ("Dimmick"). The Office concedes that DeKoning does not disclose the storage server head and storage devices as being

installed in a chassis; however, the Office cites Dimmick in this regard, contending that DeKoning discloses all other limitations of claim 7, and further contends that it would be obvious to combine the teachings of Dimmick and DeKoning to achieve the present invention.

Applicants respectfully disagree and traverse the rejection. To support a rejection for obviousness, the cited combination of references must teach or suggest *all of the claim limitations*. *In re Royka*, 490 F.2d 981 (CCPA 1974); MPEP 2143.03. However, no combination of DeKoning and/or Dimmick teaches or suggests all of the limitations of claim 7.

From a careful reading of claim 7, it will be clear that claim 7 requires that, initially, a plurality of mass storage devices *and* a storage server head are all installed *in the same chassis* (note the limitations emphasized above in bold in the first element of claim 7). Dimmick discloses an enclosure for various functional modules, which may include multiple tape drives 200. However, Applicants find no disclosure or suggestion in Dimmick that a storage server *head* may also be contained within that enclosure. The Office has conceded that DeKoning does not disclose this feature. For at least this reason, therefore, the cited combination fails to teach or suggest all of the limitations of claim 7. Therefore, the subject matter of claim 7 cannot be held obvious based on the cited combination.

Furthermore, from the Office Action it appears that the Examiner did not appreciate and/or treat the subject matter recited in claim 7 *as a whole*. 35 U.S.C. § 103 requires that the claimed invention *as a whole* must be obvious in order to support a rejection under that section. Claim 7 is directed to a technique of converting a

standalone ("integrated") storage server (i.e., a storage server in which a storage server head and mass storage devices are all contained in a single chassis) into a "dumb" mass storage device box and then enabling a separate, *external* storage server head to assume ownership of the mass storage devices within that box. This functionality and purpose is clear from the plain language of claim 7, even though not stated in precisely these words. See also Applicants' specification at paragraphs [0014] – [0016] for background. There is not even a remote suggestion or motivation to accomplish this in either DeKoning or Dimmick or in the prior art in general.

For the foregoing reasons, therefore, claim 7 and all claims which depend on it are patentable over the cited art.

Claim 14

Claim 14 was not rejected based on prior art. Claim 14 was amended, however, to overcome the rejection under 35 USC § 112, second paragraph. Therefore, Applicants believe that claim 14 and all claims which depend on it are also patentable.

Dependent Claims

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.

Conclusion

For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If there are any additional charges/credits, please charge/credit our deposit account no. 02-2666.

Respectfully submitted,
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